RESPONSE TO COMMENTS

Permittee: J.R. Simplot Company
(Burley-Heyburn Facility)
Permit No.: ID-000066-3

Background: On September 24, 1997, EPA proposed to modify the NPDES permit for the J.R. Simplot Company. EPA proposed modifying the permit in order to incorporate the wasteload allocations of the recently completed *Middle Snake River Watershed Management Plan*. The Management Plan addresses total phosphorus loading in the Middle Snake River. The public notice of the proposal initiated a 45-day comment period which expired on November 10, 1997. This document summarizes the comments EPA received regarding the J.R. Simplot permit modification and EPA's response to those comments.

Comment 1. Expression of Phosphorus Limitations

Comment 1a. Daily and Monthly Limitations for Phosphorus. EPA received a number of comments regarding the appropriate term for the phosphorus limitation (i.e. daily, monthly, or some other averaging period). EPA proposed a monthly and daily limitation for phosphorus. The Idaho Department of Environmental Quality (DEQ) provided the following comment in a letter dated November 6, 1997: "Deletion of the total phosphorus daily limit should be considered. Phosphorus, biologically does not have a "toxic" effect and is not a toxic rather a pollutant of concern. It seems that a daily limit does not have significance if a monthly average limit is observed." In a letter dated November 5, 1997, the Mid-Snake WAG Municipality Group provided a similar comment regarding the daily limitation.

J.R. Simplot's comment letter includes an attachment from the consulting firm CH2M Hill regarding the phosphorus limitation. The following summarizes the primary comments from the attachment:

> "The only defensible technical basis in the mid-Snake case is use of long-term limitations because the 10-year average modeling basis for eutrophication effects and phosphorus reduction benefits. Establishing a precedent that mandates short-term limitations is not wise in that it may preclude implementation of reasonable, cost-effective, and more environmentally benign control practices (such as BNR systems)."
> "The only identified averaging periods for NPDES limitations found in the TMDL report are for the aquaculture industry. For this industry, the TMDL specifies quarterly load limitations that "do not exceed the facility's wasteload allocation on an annual basis"...
>
> "Use of longer averaging periods for phosphorus is without question the common-sense approach because eutrophication effects are manifested over long time periods."

For nutrient-related eutrophication effects, there is no acute toxic concern. Short-term spikes in concentration or load would not be harmful as long as limitations that control overall long-term loads are in place.

Copies of relevant portions of NPDES permits from seven other states that contain limitations for nutrients that are expressed in terms other than daily and monthly limits as specified in the mid-Snake permits were provided.

Response. The NPDES regulations at 40 CFR 122.45(d) require that all permit limits be expressed, unless impracticable, as both average monthly limits (AMLs) and maximum daily limits (MDLs) for all discharges other than publicly owned treatment works (POTWs), and as average weekly limits (AWLs) and AMLs for POTWs.

The objective in setting effluent limits is to establish limits that will result in the effluent meeting the wasteload allocation (WLA) under normal operating conditions virtually all the time. While not possible to guarantee, through permit limits, that a WLA will never be exceeded, it is possible to use procedures which can account for extreme values. Permit limits can be established that will have low statistical probability of exceeding the WLA and will achieve the desired loading. The statistical procedures used by EPA to determine effluent limitations are described in the *Technical Support Document for Water Quality-based Toxics Control* (EPA March 1991). As discussed in the fact sheet accompanying the draft permit, EPA followed the statistical procedures of the TSD in developing the AML and MDL for facilities in the Middle Snake River watershed.

Developing both an average monthly limit and a maximum daily limit (average weekly limit for POTWs) meets the requirements of EPA regulations and also assures that the long-term average loading requirements of total phosphorus to Middle Snake River system, as specified in the management plan, is being met. Having both an AML and MDL also ensures good performance of the treatment system. Setting a MDL establishes an upper bound on effluent values used to determine the monthly average and provides a measure of effluent compliance during operational periods between monthly sampling.

EPA will include the AML and MDL for phosphorus as proposed for the food processors as required by the regulation. For POTWs, EPA will drop the MDL and instead have an AML and an average weekly limitation (AWL), also consistent with the regulation. No evidence has been presented during the comment period that these limitations, which are based on targets established in the approved management plan, are "impracticable" as cited by the regulations.

Comment 1b. <u>TMDL Wasteload Allocations.</u> CH2MHill provided the following comment regarding the implementation of the wasteload allocations: "EPA arbitrarily determined that the long-term TMDL wasteload allocations should be implemented as average monthly limitations".

Response. As discussed in the fact sheet accompanying the draft permit, EPA followed the

procedures of the *Technical Support Document for Water-Quality-based Toxics Control* (TSD, EPA 1991, page 103), in determining how to incorporate the wasteload allocations of the Watershed Management Plan into permit effluent limitations. As stated in the TSD, the wasteload allocation value for nutrients should be used as the average monthly limitation in the permit. EPA received the concurrence of this method for implementing the wasteload allocation from the Idaho Division of Environmental Quality, Twin Falls Regional Office, who served as the principle writers of the Watershed Management Plan.

Comment 1c. Biological Nutrient Removal Process. CH2MHill commented in the attachment to the Simplot comment letter that the State of Wisconsin wanted to encourage the use of biological nutrient removal (BNR) processes among facilities reducing phosphorus because of the greater overall environmental benefits compared to physical/chemical systems (e.g., lower chemical use and sludge production), but recognized that there is greater overall variability in operating efficiencies with BNR systems and greater difficulty in meeting short-term limitations. Wisconsin recently has issued permits with a 12-month rolling average limitation for phosphorus. The Association of Idaho Cities (letter dated November 10, 1997) raised a similar concern that a daily limitation for facilities located in temperate climates could eliminate the use of BNR as a treatment option due to cold weather operating performance.

Response. Biological nutrient removal (BNR) is a type of enhanced activated sludge treatment process that causes/allows the return activated sludge to become anoxic (usually by installing an anoxic tank in the return piping between pump station and the mixing chamber at the head of the aeration basins). When the sludge become anoxic, the bacteria begin to uptake the phosphates. This process can be effective in controlling phosphates, but because it is biological, it is susceptible to the same concerns as activated sludge performance during cold weather situations. The commentor states that this technology can reduce phosphorus by 80-85%.

The Management plan requires a 20% reduction in phosphorus for food processors at the end of five years. Both of these reductions are measured from the monthly average, not the daily limitations, and are significantly less than BNR potential optimal performance. Site specific analysis would need to be conducted to determine if BNR is precluded by the inclusion of a MDL but no evidence has been presented that would indicate that the phosphorus reductions, small relative to BNR reduction potential, could not be met with this technology in this watershed.

Comment 1d. Phosphorus Effluent Trading. Simplot commented that they intend to explore the concept of effluent trading with nonpoint sources in the area and with that regard specified a phosphorus limitation: "To do so (trading) with nonpoint sources would require annual, or at the very least quarterly, limits. Daily limits are of no relevance at all in a point/nonpoint trading situation."

Response. EPA is also interested in pursuing market-based incentives, such as effluent trading, to reduce nutrient loading in the Mid-Snake River watershed. At this point, no trades have been established or proposed and, therefore, are not reflected in this permit modification. Should

trades be established at a later date EPA will work with the participating parties in order to facilitate trades and to establish appropriate mechanisms to make the trades enforceable.

Comment 2. Compliance date for the phosphorus limitation. DEQ made the following comment regarding the phosphorus compliance date: "The date of May 1, 2002 should be changed to reflect a date five years from the date the permit is issued. This office would suggest language to that effect rather than a specific date."

Response. The draft permit required the permittee to achieve compliance with the phosphorus effluent limits by May 1, 2002, five years from the date of approval by EPA of IDEQ's *Middle Snake River Watershed Management Plan*. Including a specific date in the final permit facilitates compliance tracking through EPA's compliance database, therefore, the final permit will include a specific date for achieving compliance. However, the compliance date in the final permit has been revised to allow the facility five years from the effective date of the permit modification to achieve compliance.

Comment 3. Orthophosphate monitoring. DEQ commented that monitoring and ambient monitoring of dissolved orthophosphate should be deleted.

Response. EPA will delete the ambient and effluent orthophosphate requirement. Orthophosphate and total phosphorus was being monitored to gather data to support development of the phosphorus Management Plan and to understand the orthophosphate/total phosphorus ratio. With the Management Plan now final and with continued phosphorus monitoring in the permit, additional orthophosphate monitoring is not needed.

Comment 4. A phosphorus compliance schedule beyond the expiration date of the permit. The proposed modified permit contained a schedule that allowed five years for the facility to come into compliance with the phosphorus limitations. The five-year period was taken directly from the Management Plan. After issuing the public notice of the proposed permit modification, EPA recognized that the five-year compliance schedule extended beyond the November 1999 permit expiration date of the J.R. Simplot permit (also for the McCain Foods and City of Twin Falls permit modification). EPA initiated discussions with interested parties since EPA was uncertain whether, under Idaho Water Quality Standards (WQS), a compliance schedule could extend beyond the expiration date of the permit.

Comment regarding this issue was submitted by the J.R. Simplot Company. Simplot stated in their comment letter of November 10, 1997, that they were considering an EPA suggestion that Simplot request a revocation and reissuance of the permit. The reissued permit would extend the term of the permit five years and could also include a five-year phosphorus compliance schedule, concurrent with the permit term. Simplot agreed that the compliance date beyond the expiration date of the permit did not appear appropriate.

Response. State of Idaho WQS 16.01.02.400.03 allows discharge permits to incorporate compliance schedules so that a discharger can phase in compliance with water quality-based effluent limitations over time. The standard also states that: "Compliance schedules for NPDES permits are limited to five years or the life of the permit." EPA asked the State of Idaho Department of Environmental Quality (DEQ) whether Idaho WQSs allow a five-year compliance schedule that extends beyond the expiration date of the permit. The state responded in a letter dated April 3, 1998, from Douglas Conde, Deputy Attorney General for the State of Idaho to Adrianne Allen of the EPA's Office of Regional Counsel. Mr. Conde states that DEQ's position is that the Idaho WQSs allow a compliance schedule to extend beyond the original expiration date for an NPDES permit if that permit is administratively extended.

Under Clean Water Act Section 401(a)(1), EPA may not issue the permit modification with a compliance schedule until a certification is granted by the State of Idaho. On July 31, 1998, EPA received the Water Quality Certification from Idaho DEQ which included certification of a five-year compliance schedule (letter from Doug Howard, Regional Administrator, to Robert R. Robichaud EPA). EPA, therefore, will incorporate a five-year compliance schedule into the final modification for the J.R. Simplot permit.

Endangered Species Consultation: The U.S. Fish and Wildlife Service has issued a Biological Opinion on the effects of EPA issuing this and eight other NPDES permits that authorize discharge into the Middle Snake River. The Service's opinion is that the proposed action is not likely to jeopardize the continued existence of listed snail species in the action area. The opinion also includes an "Incidental Take Statement". Under the terms of Section 7(b)(4) and Section 7(o)(2) of the Endangered Species Act, take of species that is incidental to an agency's action is not prohibited provided that such taking is in compliance with the terms and conditions of the Incidental Take Statement. The Service identified eight "reasonable and prudent measures" that must be addressed by EPA in order to minimize incidental take. As described in the Biological Opinion, measures listed in the Incidental Take Statement are "non-discretionary, and must be implemented by the EPA so that they become binding conditions of any grant or permit issued to the applicant..."

In order to meet the conditions specified in the Incidental Take Statement, EPA has revised the twenty-four hour notice of noncompliance reporting requirements in section II of the permit. The permittee shall report conditions that endanger listed snail species to both EPA and the U.S. Fish and Wildlife Service within 24 hours from the time a permittee becomes aware of the circumstances. Likewise, written reports on noncompliance occurrences that endanger listed Snake River snails must be sent to the Service. Changes to address these reporting requirements have been made to the final permit. No other revisions to the NPDES permit language are necessary to address the conditions of the Biological Opinion.